Mobile Medical Care for the Rural Homeless: A Review of Relevant Literature and Recommendations to the Tacoma-Pierce County Medical Reserve Corps

A Coolidge Otis Chapman Honors Program Senior Thesis

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I. Introduction

On any given night approximately 600,000 individuals will be homeless in the United States (Henry, Cortes, Shivji, & Buck, 2014; Henry, Shivji, de Sousa, & Cohen, 2015). Of these 600,000 men, women and children, 31% will be without shelter (Henry et al., 2015). Although homelessness is primarily thought of as an urban problem, reinforced by the presence of homeless individuals on the street and by the image of homelessness in the media, a minimum of 4-7% of the total homeless population resides in completely or mostly rural areas of the country (Henry & Sermons, 2010a; Henry & Sermons, 2010b). The Tacoma-Pierce County Medical Reserve Corps (MRC) has become increasingly aware of homelessness in rural areas of Pierce County and is considering the use of a mobile medial clinic to serve this population. In this review, I will provide a summary of relevant literature on rural homelessness and mobile medical care and offer recommendations to help in the implementation of a mobile clinic.

A critical limitation to this review is the lack of formal research on both rural homelessness and mobile medical care to serve this population. A large number of small, anecdotal case reports exist on this topic, however, synthesized analysis is greatly lacking. For this reason I rely on a relatively small number of sources, several of which are more than 10 years old. The goal of this project was not to provide a comprehensive review but to summarize relevant information for use by the Tacoma-Pierce County MRC. I begin this report by introducing the topic of rural homelessness and summarizing the relevant differences between rural and urban homeless populations and the barriers they face to receiving care. I then introduce the medical model of mobile healthcare and assess some benefits and challenges of implementation as well as strategies for success. Finally, I provide several recommendations to the Tacoma-Pierce County MRC based on the relevant literature and original work I collaborated in on mapping homelessness in Pierce County.

II. Rural homelessness

Rural homelessness has historically taken a backseat to urban homelessness due to the smaller density of affected individuals and fewer resources of rural communities (Archibold, 2006; Aron & Fitchen, 1996). However, the structural issues that contribute to homelessness such as unemployment, low-wages, poverty, and lack of social support are not limited to urban areas. Nationally, rural areas have higher rates of poverty and unemployment and for rural communities with limited health and social services the burden of homelessness may be disproportionately heavy (Henry & Sermons, 2010a; Post, 2002). To date, little research has been done

on the rural homeless population in the United States, largely due to a general lack of visibility of the rural homeless (Whitley, 2013). Additionally, homelessness in rural areas is more frequently episodic and spread over great geographic distances in remote areas compared to urban homelessness (Whitzman, 2006; Aron & Fitchen, 1996). These limitations are generally considered to have contributed to a severe underestimation of the rural homeless problem (Robertson, Harris, Fritz, Noftsinger, & Fischer, 2007; Whitely, 2013).

Demographics

Beginning in 2010, communities participating in the U.S. Department of Housing and Urban Development (HUD) annual point-in-time count were classified into one of five geographic categories, ranging from completely urban to completely rural (Henry & Sermons, 2010a). The goal of this classification was to determine whether homelessness differs across geographic types. For this classification system, HUD used Housing Assistance Council (HAC) definitions of urban and rural to categorize reporting communities. HAC defines a rural census tract as less than 16 housing units per square mile and an urban tract as more than 1,600 housing units per square mile. HUD classified a reporting community as urban if made up almost entirely of urban census tracts and as rural if almost entirely rural in composition (Henry & Sermons, 2010a). Twenty percent of all reporting communities were classified as rural or mostly rural (Henry & Sermons, 2010a). What HUD found was that approximately 7% of the identified homeless population resided in mostly or completely rural areas. Nationally, the rate of rural homelessness averaged 14 individuals per 10,000 compared to 29 per 10,000 in

urban communities (Henry & Sermons, 2010a). These rates, however, did vary dramatically across the country. Two communities with the highest rates of homelessness in the 2007 point-in-time count were classified as completely rural. Mendocino County in California and Monroe County in Florida had the second and third highest rates of homelessness in the U.S. with rates of 161.3 and 146.9 per 10,000 respectively. These communities were second and third only to Detroit Michigan with a rate of 216.0 homeless per 10,000 (Henry & Sermons, 2010a).

HUD's analysis also found that individuals living in rural homelessness represent a different demographic than their urban counterparts. Nearly 50% of the rural homeless identified were persons in families with children, compared to 37% nationally, and rural communities had twice the rate of unsheltered families (Henry & Sermons, 2010a). Rural homeless individuals were also more likely to be single women with children, to have disabilities, and to live in a shelter not suitable for human habitation than urban homeless. Urban homeless people, in contrast, were far more likely to be alone and to be a member of a racial or ethnic minority group (Henry & Sermons, 2010a). One explanation for this finding is that there may be a more formal infrastructure to serve homeless families and disabled persons in major metropolitan areas, contributing to a decreased rate of homelessness in this demographic (National Advisory Committee on Rural Health and Human Services, 2014).

Economically, rural homeless individuals have been found to have slightly greater financial resources than their urban counterparts, despite having lower levels of educational attainment (Burt, 1999). In the 1996 National Survey of

Homeless Assistance Providers and Clients (NSHAPC), homeless individuals residing in rural areas had the highest median income in the past month ($475) compared to individuals in suburban areas ($395) and metropolitan areas ($250). Further, only 6-7% had no source of income compared to 15% in urban areas (Burt, 1999). Although employment rates are higher for the rural homeless, the study found that jobs were typically temporary and did not include healthcare or retirement benefits (Post, 2002). The NSHAPC also found rural clients more likely to have received cash assistance from friends and family, but only 35% had received government assistance in the last 30 days compared to 45% nationally (Burt, 1999).

Health Status

For rural and urban homeless persons alike, a strong association has been shown between homelessness and poor physical and mental health (Craft-Rosenberg, Powell, & Culp, 2000). Homeless individuals are an estimated three to four times more likely to die prematurely than the their housed counterparts and experience an average life expectancy of 42-52 years compared to the national average of nearly 80 years (O'Connell, 2005). For those without permanent housing, health risks may be introduced or intensified from crowded living conditions, exposure to dirt, rodents, pollutants, extreme weather conditions, and chronic stress (Craft-Rosenberg et al., 2000). Despite inadequate research on the national scale, rural homeless individuals have generally been found to be of worse health and to have higher rates of chronic conditions and disabilities than their urban counterparts (Burt, 1999; Post, 2002; Robertson, 2007). In the 1996 NSHAPC survey, 47% of rural clients reported to have needed to see a health care

professional in the last year but were unable to do so. Only 22% homeless clients in urban and suburban areas reported this (Burt, 1999). Surveyed healthcare providers attributed the poorer health of rural homeless individuals to a greater delay in receiving treatment (Post, 2002). Although the NSHAPC found similar rates of mental illness and self-reported drug problems among rural and urban homeless populations, rural homeless individuals were six times more likely to report an alcohol-only problem in the past year (Burt, 1999)

Barriers to Care

A variety of complex structural, personal and sociocultural factors prevent homeless individuals in both rural and urban setting from receiving healthcare. The 1996 NSHAPC survey for homeless providers and clients cited three primary barriers to care experienced by rural homeless individuals: lack of insurance, limited or no access to transportation, and a lack of health services in rural areas (Burt, 1999). In addition to these barriers, a 2006 survey of 33 homeless individuals found that 18% of participants cited intimidation or lack of trust for the health system as a barrier to receiving care. Another 6% of respondents cited stigmatization as a barrier (Post, 2007). These problems are not exclusive to the rural communities, however, they are believed to be more prominent and therefore, have a greater impact on these individuals (Robertson et al., 2007).

III. Mobile Health Care

Mobile health care is one solution for providing homeless individuals with accessible care that they are otherwise not able or willing to use. If care providers and their services were available on wheels, clients located in areas with limited

health services and transportation would be able to receive basic health care. The major source for information in the following sections comes from a 2007 report by Patricia Post sponsored by the National Health Care for the Homeless Council. This report describes the experience of 33 Health Care for the Homeless (HCH) outreach vehicles in 24 states between August 2007 and August 2007 (Post, 2007). This source is the most comprehensive research on mobile health care for homeless individuals to date and primarily informs my recommendations to the Tacoma-Pierce County Medical Reserve Corps.

Benefits and Challenges

Mobile health care may be used to benefit rural homeless individuals by reducing the previously described barriers to care. By serving a number of communities, the amount of travel required by clients to access services may be greatly reduced. Additionally, by operating on a model of free or community healthcare, a lack of insurance benefits does not stand in the way of care. Mobile healthcare has also been described as fostering a link between social services and homeless individuals and may be a good first step for reintroduction to social services (Hill et al., 2012; HUD's Homeless Assistance Programs, 2009; Paris & Porter-O'Grady, 1994). The mobile model is able to provide service to clients in an informal and familiar environment that is both conveniently located and welcoming (Nuttbrock, 2003). It has also been found that mobile clinics promote healthcare cost containment by providing homeless individuals with less expensive primary care and an alternative to emergency room visits (Post, 2007). A 2013 Harvard Medical School study found that one Boston Mobile clinic that served 5,900 patients

between 2010 and 2012 had a ratio of total savings to total expenditures, or return on investment, of 1.3. This return on investment saved the healthcare system $364,000 or approximately $62 per individual served during the two-year period (Song, 2013).

Mobile healthcare is not, however, able to meet all of the complex health needs of homeless individuals and there may be unique costs and challenges to maintaining mobile health units (Post, 2007). Continuity of care is a key to healthcare success, and mobile units may face additional challenges following up with clients and ensuring that an individual stays engaged with the system (HUD's Homeless Assistance Programs, 2009). Further, although the mobile unit is able to reduce transportation and financial barriers to receiving their services, these obstacles are still in place if more sophisticated care or other services are needed. The National Health Care for the Homeless Council report also found that 58% of units lacked financial capacity, 48% reported breakdowns and equipment problems and 33% reported staffing as obstacles to clinic success (Post, 2007).

Strategies for success

From the 2007 National Health Care for the Homeless survey, two primary factors were identified as fundamental to clinic success: selection of service sites where homeless individuals congregate and have access to the unit and collaboration with community partners for referrals, space to park, and for help reaching targeted populations. Other strategies for success generally included compassionate, culturally competent outreach (Post, 2007). One model for this type of outreach is the knowledgeable neighbor model, as used in the Family Van mobile

health clinic of Boston, MA. This model generally relies on two basic steps for success: reaching clients through creating a community hub of wellness and empowering clients to access and improve their health (Hill et al., 2012). Specifics of this model can be found in Appendix 1**.**

To provide the most benefit and break the cycle of homelessness, the unit should be able to connect individuals with a variety of healthcare, social, and human services to address issues such as shelter, employment, insurance benefits, and food needs (Paris & Porter-O'Grady, 1994). Providing a variety of services may also foster positive relationships with clients. Of 33 mobile units, 79% reported that fostering a positive rapport with clients was critical to clinic success (Post, 2007).

IV. Recommendations

Location

A key goal of this project was to identify locations throughout Pierce County where the mobile clinic might be most effective in serving the rural homeless population. I began by contacting community partners to identify and map encampment locations. With assistance from Medical Reserve Corps staff, the Metropolitan Development Council, the Pierce County Sheriffs Department, and other community partners, known rural encampments were identified and mapped (Appendix 2-4). One concern expressed by various community partners including the Projects for Assistance in Transition from Homelessness (PATH) team of Greater Lakes Mental Healthcare was client confidentiality. It is possible that after the establishment of a mobile clinic and proof of results, further encampment identification would be shared with the MRC. Identification of key locations that are

able to serve the most number of individuals is critical to success of the mobile clinic and I recommend further efforts be made to better map this population.

After mapping identified encampments, I observed a connection between encampment sites and public libraries. Specifically, encampments were located in close proximity to the Orting, Graham, Roy, and Eatonville public libraries (Appendix 5). Homeless individuals may view libraries as a safe space, they are free to use, provide protection from the elements, and access to restrooms and running water (Kelleher, 2013). These libraries may have previously established relationships with targeted individuals and would likely be a welcoming partner for hosting the trailer. Other locations with established relationships to clients such as food banks, school, and shelters may also be successful sites to establish the trailer. From the 2007 National Health Care for the Homeless survey, 82% of mobile units attributed program success to site selection and collaboration with community partners (Post, 2007). By working closely with community partners who already have already developed relationships with a client base, the mobile clinic could more rapidly identify and reach rural homeless individuals.

Establishing a Model in Pierce County

Set to launch in April of this year, the Mom and Me mobile clinic will be providing primary care to low-income residents of rural Pierce County. Maintaining a relationship with open communication to the Mom and Me clinic will ensure that the greatest number of people can be served in Pierce County. While the Mom and Me clinic will focus on primary care and screening, the MRC clinic can supplement this service with wound care and immunizations. We may also learn from their

experiences and challenges as they develop a client base and explore a variety of clinic locations throughout the area. Should the Mom and Me clinic identify areas of the county that are particularly in need, the MRC trailer can reinforce efforts in this community. Likewise, if a community is well served and there is limited need for a mobile unit then the MRC may deprioritize this area.

The Mom and Me unit has also established a unique source of funding through a thrift shop in Enumclaw. Moving forward, the MRC mobile clinic will need to identify sources of sustainable funding to ensure the success of the clinic. A majority of mobile clinics (58%) in the 2007 National Health Care for the Homeless survey identified lack of financial capacity as the most significant obstacle they encounter (Post, 2007). Should the thrift shop provide a steady source of funding, the MRC may consider mobilizing volunteers in other unique ways to provide financial security for the trailer.

Conclusion

In summary, I have introduced the Tacoma-Pierce County Medical Reserve Corps to the topic of rural homelessness and mobile medical care. From collaboration with community partners I have mapped known rural homeless encampments in the area and have recommended specific locations for implementation of the trailer. I have also recommended maintaining a close relationship with the Mom and Me group in the area and collaborating with them in optimizing care for residents. In the meantime, volunteers may utilize the trailer during other community events such as at Project Homeless Connect and at school

immunization clinics to train staff and familiarize community partners with the mobile unit.

Appendix

KNOWLEDGEABLE NEIGHBOR MODEL

STEP 1: Reaching Clients Through Creating a Community Hub of Wellness

A. Building trust on the Family Van
   1. Service is led by health educators, dietitians, and HIV counselors, many of whom are from the community.
   2. Inclusive relationships are created through interpersonal informality in a safe, nonhierarchical, nontraditional health care environment.
   3. Clients control the encounter, deciding when to come, what screenings to receive, and when and how to act on the information they receive.
   4. Staff receives cultural competence training to ensure that they have the skills to learn each client's unique social and economic context, cultural beliefs, and behaviors.

B. Building trust in the community
   1. Long-term weekly presence in neighborhoods (established 1992)
   2. Strong collaborations with community health centers, hospitals, churches, and others
   3. Continual outreach through participation in community events and street outreach

C. Reducing financial barriers: no charge to clients

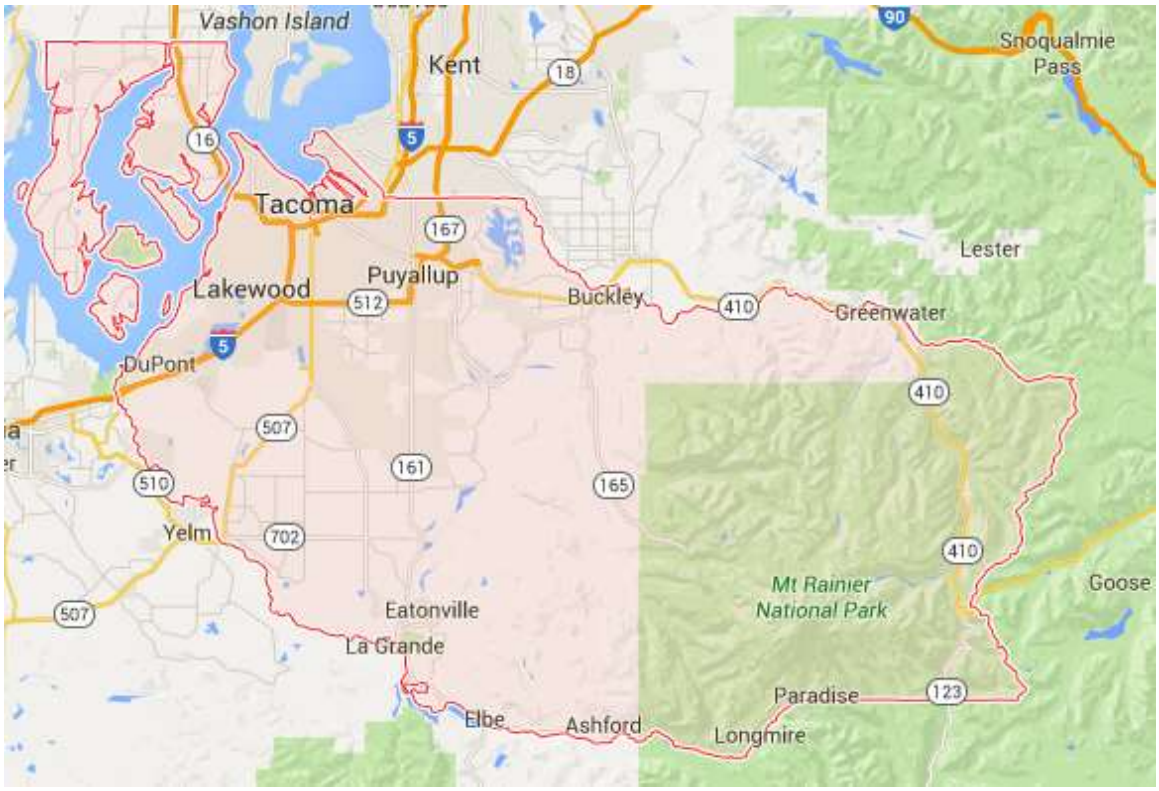
D. Reducing logistical barriers: drop-in service in the neighborhood (no appointments, no waiting, no eligibility requirements, no distance to travel)

STEP 2: Empowering Clients to Access Care and Improve Their Health

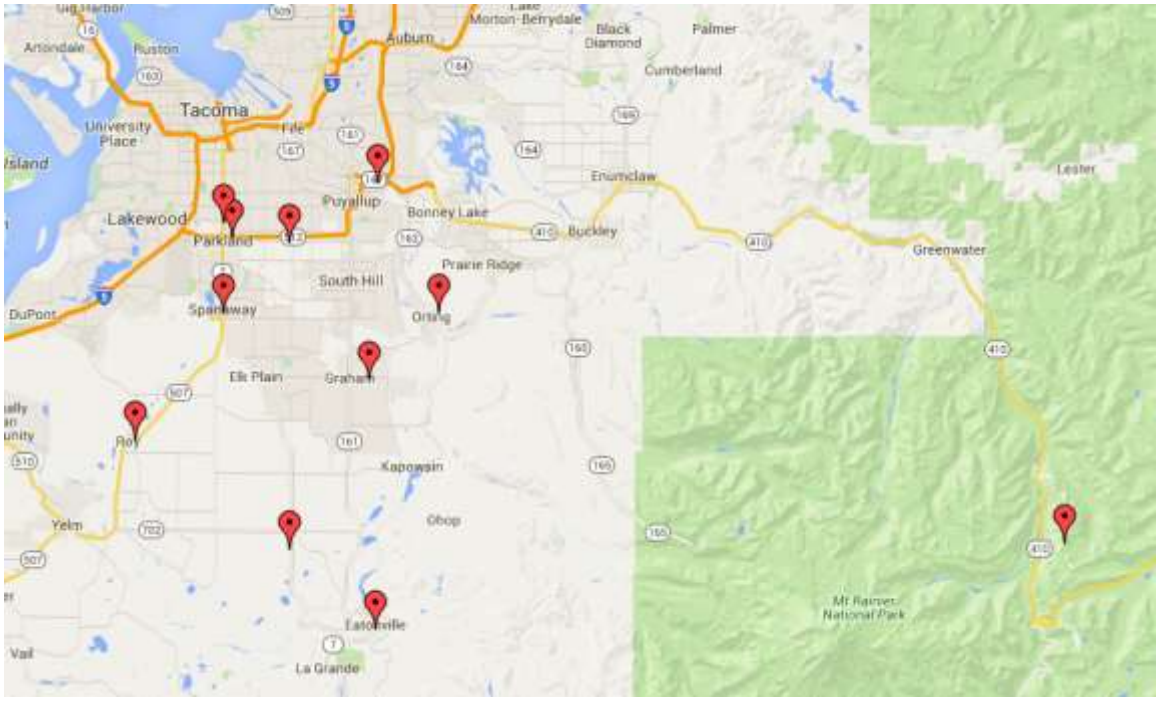
1. Screening for several chronic conditions, including hypertension, diabetes, and hypercholesterolemia, so that clients can learn about their health
2. Culturally competent health literacy and motivational interviewing: to educate clients about their health and help them develop appropriate wellness strategies
3. Creating a bridge into care: through referral to community neighborhood health centers and social services, with additional advocacy and navigational support

Note. The Family Van Mobile Health Clinic's Knowledgeable Neighbor Model: Boston, MA, 2006-2009

Appendix 1. Knowledgeable Neighbor Model as utilized in the Boston Massachusetts Family Van and described in Hill et al. (2012)

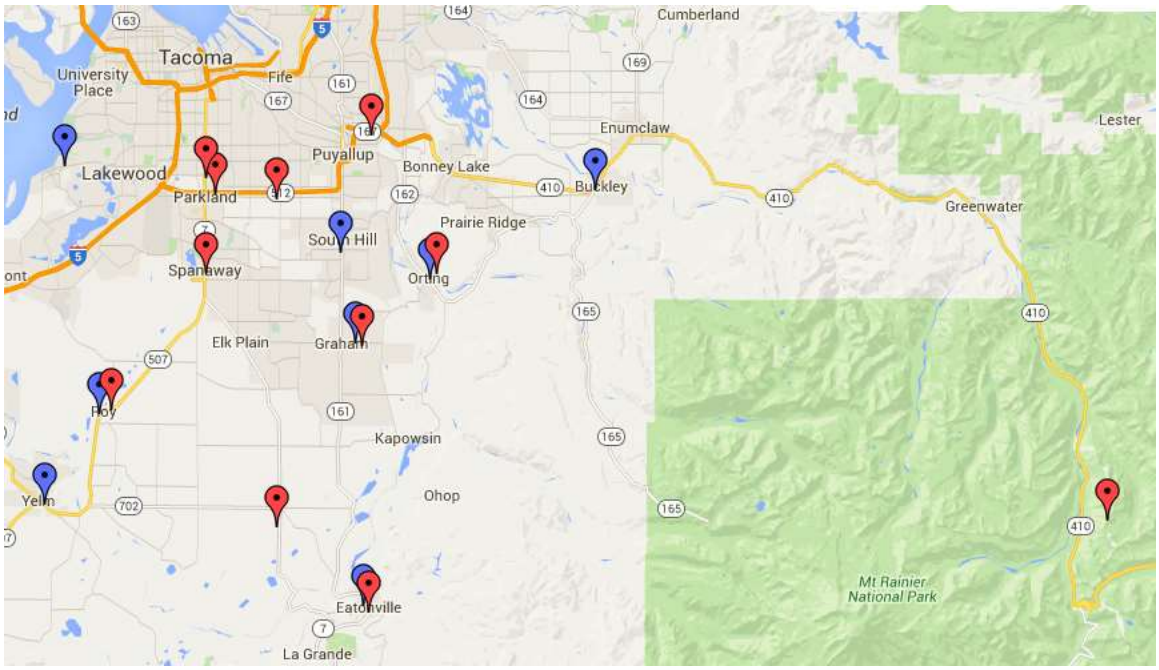


Appendix 2. Map of Pierce County



Appendix 3. Mapped Rural Encampment Locations in Pierce County

Appendix 4. Sample responses of homeless encampment locations from community partners.



Appendix 5. Mapped homeless encampments (red) and public libraries (blue)

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